



C&TS DISPATCH

VOLUME 33
WINTER

NO. 4
2020

Alamosa: Three Visits, Thirty-six Years Powder Magazines on the C&TS Building Passenger Trucks from the Rails Up

Plus: Introducing the Friends' New Website

John Bush's Retirement

Work Session G and Special Session Reports

2021 Friends Work Session Schedule

2021 C&TS Railroad Schedule



AT
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1970-2020

President's FORUM



C&TS DISPATCH

Friends of the Cumbres & Toltec Scenic Railroad, Inc.

William Lock, Founder-1988

Vol. 33, No. 4 Winter, 2020

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Terms ending 2022

Ed Beaudette, Scott Hardy, Don Stewart

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C&TS DISPATCH

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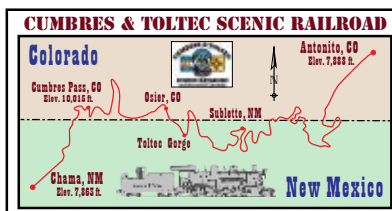
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The C&TS Dispatch is published four times each year by The Friends of the Cumbres & Toltec Scenic Railroad Inc., a New Mexico nonprofit corporation. The Friends is the official museum arm for the Cumbres & Toltec Scenic Railroad, a 64 mile-long railroad and museum of railroad history and technology, operating between Antonito, Colorado, and Chama, New Mexico. The railroad is owned jointly by the States of Colorado and New Mexico. As the museum arm, the Friends is dedicated to the preservation and interpretation of the railroad. The Friends is an Affiliate Member of the Heritage Rail Alliance (HRA). Family membership in the Friends is \$35.00 per year; outside the USA membership is \$50.00. All contributions are fully tax deductible and will be gratefully accepted. For information, please write us in Albuquerque at the Friends of the Cumbres & Toltec Scenic Railroad, Inc., 4421 McLeod Rd. NE, Suite F, Albuquerque, NM, 87109, or call us at (505) 880-1311.



Denver & Rio Grande Railway: 1880-1886
Denver & Rio Grande Railroad: 1886-1921
Denver & Rio Grande Western Railroad: 1921-1970
Cumbres & Toltec Scenic Railroad: 1970-today

The Cumbres & Toltec Scenic Railroad is both a National Historic Landmark and a State Registered Historic Site.

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Looking Toward 2021

I know we all have a desire to put 2020 in our rearview mirrors and cast our eyes towards the future. I do not need to recap events on the national or world scene that we have all lived through this past year; we all want to move ahead to whatever the year 2021 will bring us.

We know the Cumbres & Toltec had an incredibly challenging 2020 season. With Colorado and New Mexico's restrictions and social distancing mandates, the Railroad was limited in the number of passengers it could carry. Still, with a better-than-expected fall color season, the Railroad ended the season with approximately 11,200 riders. According to the Heritage Rail Alliance, as many as 40% of the tourist railroads in North America may not survive the pandemic. This is a very sobering statistic and we can be thankful that despite our 2020 ridership, the Railroad can still move forward to 2021.

As the C&TS looks ahead, there are still many unknowns, but the Railroad's staff is already working on the 2021 schedule. At this writing, opening day is still in flux; COVID restrictions permitting. We are looking at either the traditional Memorial Day weekend or later on in mid-June. As announced earlier, the Railroad's 50th Anniversary events scheduled

for this past year are being pushed to 2021. There could be some modifications to the dates and activities but we'll let you know what will be in the offing once that planning is complete.

The Friends are also making plans for the various roles our organization will play in the 2021 anniversary celebration events. If all goes well we will again offer a Locomotive 168 photo charter the last week of June. This would be a Saturday and Sunday event running out of Antonito. Our annual Moonlight & Wine Tasting Train is also scheduled for the month of July.

As we look forward at our work sessions and volunteer activities, we will try to be as prepared as possible. We may still have to make adjustments based on the requirements of both states. How quickly we start seeing some normalcy in 2021 is anyone's guess but we hope that our members will have the opportunity to participate in work sessions in both Chama and Antonito next year.

We understand that some of you will be chomping at the bit to sign up for work sessions. Others may still be a little hesitant and we understand. However you prefer to participate, your continued support is appreciated.

As you make your travel plans for next summer and fall, consider riding the Cumbres & Toltec, especially if you have not ridden for some time. Riding on the C&TS provides you an opportunity to get away by taking a bit of a road trip—followed by a railroad trip—as well as an opportunity to support the Railroad. Keep in mind that the C&TS will need to rebound from a situation that has caused a temporary loss of ridership. Our members' participation can help. Don't forget the discount offered to Friends' members! I know the businesses in Antonito and Chama will be grateful for your visit as well.



On the Cover:

Friends member **John Russell**, on his second of three trips visiting Alamosa in the mid-20th century, caught D&RGW K-36 488 pulling off the turntable at the Alamosa roundhouse on September 16, 1964. His Alamosa steam-era photographs begin on page 14.

In closing, C&TS President & General Manager John Bush announced his retirement from the C&TS on November 14th. I want to thank him for all the support he provided the Friends over the past eight years. Our success as an organization depends on having a good working relationship with the Railroad and John provided that and so much more. You can read more about his railroading history and retirement in the column to the right.

As challenging as 2020 has been, I commend and thank our members for their support. Dues continue to come in and calendars and merchandise are being ordered and mailed ahead of the holidays. Despite the roadblocks and speed bumps, we will persevere as an organization and remain steadfast in our mission of preserving and interpreting the Cumbres & Toltec Scenic Railroad. Enjoy the holidays, stay safe and hope we see you in 2021.



Tim Tennant



FC&TS 2020 Board of Directors Election Results

Elected to two-year terms are

Ed Beaudette: 957 votes

Scott Hardy: 953 votes

Don Stewart: 961 votes

Elected for a one-year term

Warren Smalley: 953 votes.

This filled the four seats open on the Board.

Ed Beaudette, Scott Hardy and Don Stewart will serve their terms through June 2022. Warren Smalley will serve through June 2021.

Directors not up for election with terms running through June 2021 are: *John Engs, Jim Herron, Bill Lock, Dan Pyzel, Caroline Tower, Greg Coit, John Ferrell, Wayne Huddleston and Ian Kelly.*

“TO UNDERSTAND WHERE YOU ARE GOING, YOU NEED TO UNDERSTAND WHERE YOU HAVE BEEN”

JOHN BUSH

After John Bush fell off a ladder and broke his hip and wrist several days before he turned 29 years old, it dawned on him that, “You don’t have to be old to be dead.” That life-changing—and potentially life ending—event set him on a course away from a PhD in Anthropology and toward life of railroading. As a young boy, in the early 1950s, he hung around the yard and the aging steam locomotives of the moribund Rio Grande Southern in Telluride, Colorado.

Now, years later, on November 14th, Bush announced his retirement as President and General Manager of the Cumbres & Toltec Scenic Railroad, a position he has held for the last eight years.

His tumble off a ladder and subsequent recovery reminded him, “Don’t wait. Do what you love.” After a lengthy recovery, he tried to volunteer at the Georgetown Loop Railroad doing engine maintenance and repair. Instead, he was offered regular employment. On his own, he began performing locomotive and rolling stock restoration, including the original restoration of Locomotive 168 in Colorado Springs and the repair and restoration of David Moffit’s private car, *Marcia*, heavily damaged by fire in Craig, Colorado.

In 1989, with the *Marcia* nearing completion, he was hired by the C&TS as the Chief Mechanical Officer, under the supervision of General Manager Dan Ranger. “On my first cab ride as CMO, we crossed over Cumbres Pass and passed through Tanglefoot Curve. Everything was perfect: the air was crisp, the aspens were changing, you could smell the spruce trees intermixed with coal smoke and an eagle circled the locomotive, and followed us down the track. I said to myself, “Take me now, God. It doesn’t get any better than this.” When Dan decided to move to California, John began flying solo and continued to learn his way around K-36 Mikados.

In 1996, he traveled north—way



Photo by Stefan Wachs, stefanwachs.com

north—to become the Superintendent of Operations on the White Pass & Yukon Railroad out of Skagway, Alaska.

In 2001, he took a position at the Great Smoky Mountain Railroad in North Carolina but he didn’t stay long; his heart was in the West and he landed at California’s Roaring Camp & Big Trees Narrow Gauge Railroad

In 2012, he returned once again to the Rockies, this time as the President and General Manager of the C&TS, the position he held until his retirement this fall.

But his love of steam railroading is only a partial reason for what he has done for much of his life. “I don’t do this for me,” he says. “It’s not for this generation of railroaders and railfans. It’s for the future generations, not just to view it but to *feel* what it was like to ride in a passenger car behind 168 or *experience* a Rotary plow clearing eight-foot drifts or *understand* just how they could build a narrow gauge railroad in the 1880s.”

Bush started out in academics and, while he never finished his PhD, he remained a teacher, helping all of us, employees, volunteers and passengers, learn and understand what the world was like in that time and place. “To understand where you are going to go, you have to understand where you have been. To me, that’s why keeping this Railroad and its past alive, not for me but for the future, is so important.”

From 1989 through 1996 and again from 2012 to 2020, John Bush has been working to keep the C&TS, and history, alive.

We wish him the best in retirement and we know the Railroad, the Friends and the citizens of New Mexico and Colorado all recognize the legacy he is leaving for all of us.



C&TS Friends Telegraph: NEWS

A New Website for the Friends!

<http://www.cumbrestoltec.org>

Is it ironic that a 19th century railroad has a 21st century website? Perhaps, but what a great way to communicate with Friends members as well as folks who want to learn about the Friends. After several years of study and ideas, **Cliffdweller Digital** of Albuquerque created the new site. It replaces the Friends website created in 2010 that, over time, had become rather patched together and shopworn.

As of this writing—just after Thanksgiving—the new site isn't "live" yet but by the time you read this, it should be up and running. The new site will launch at a new URL, but until then the old URL <http://www.cumbrestoltec.org>, is still valid.

The website will serve two audiences. As in the past, it

will be a resource for Friends members to get work session information, join or renew memberships, make donations, download volunteer forms and schedules, purchase Friends merchandise and book reservations for special trains and other Friends events.

But it will also serve as a marketing tool to recruit new members and volunteers with many photographs, history of both the Friends and the Railroad, volunteer stories about work sessions, docents and off-site volunteers, and links to the vast collection of photographs and videos available through the Friend's library.

Check it out and spread the word!

2021 RESTORATION PROJECT PLAN AND SCHEDULE

(Subject to change based on COVID restrictions.)

TRAIN BULLETIN					
DENVER & RIO GRANDE WESTERN RAILROAD					
DIRECTION	TRAIN NO.	TRAIN NAME	DESTINATION	LEAVE	REMARKS
EASTBOUND	#216	THE SAN JUAN	OSIER&ALAMOSA	4:05 PM	
WESTBOUND	#215	THE SAN JUAN	CHAMA&DURANGO	11:15 AM	
Date: July 1, 1950 (Last Train January 31, 1951)					
CUMBRES & TOLTEC SCENIC RAILROAD					
DIRECTION	#	COLO-NM EXPRESS	OSIER&ANTONITO	LEAVE	DAILY
EASTBOUND	#2	COLO-NM EXPRESS	OSIER&ANTONITO	10:00 AM	DAILY
WESTBOUND	#3	COLO-NM EXPRESS	CHAMA	2:40 PM	DAILY
Date: June 1, 1950 Season: June - October					



CUMBRES & TOLTEC SCENIC RAILROAD 2021 SCHEDULE

**OPEN TUESDAY THROUGH SUNDAY
MAY 29 (ANTONITO), JUNE 5 (CHAMA)**

(Chama may open on May 29 as well if weather and snow conditions cooperate)

Note: Routes, departure days, times, locations are subject to change.

Only full-day trips are shown. Other shorter routes will be available. Contact the Railroad for details.

No Monday operation until September 14.

Regular Season:

Tuesday, Wednesday, Thursday

Chama-Osier-Chama: 10:00 AM—4:05 PM
Antonito-Osier-Antonito: 10:00 AM— 4:40 PM

Friday

Chama-Cumbres-Chama: 12:00 PM—2:45 PM
(No lunch service. Snacks and beverages can be purchased in the concession car.)
Antonito-Osier-Antonito: 10:00 AM— 4:40 PM

Saturday

Chama-Osier-Chama: 10:00 AM—4:05 PM
Antonito-Osier-Antonito: 10:00 AM—4:40 PM

Sunday

Chama-Osier-Chama: 10:00 AM—4:05 PM

Monday, September 14 through October 24:

Chama-Osier-Chama, 10:00 AM—4:05 PM
Antonito-Osier-Antonito, 10:00 AM— 4:40 PM

Special Historic Car Set, Antonito-Big Horn-Antonito: 11am-2pm

(No lunch service. Snacks and beverages can be purchased in the concession car.)

May 29-June 5: Daily except Mondays, 11:00 AM—2:00 PM
June 13-September 5: Every Sunday, 11:00 AM—2:00 PM
September 19-October 17: Every Other Sunday: 11:00 AM—2:00 PM

2021 operating season closes on October 24, 2021



Upcoming Friends Special Events!

Friends Annual Meeting: Friday, June 18th
Friends Annual Board Meeting: Saturday, June 19th
Friends Annual Moonlight Train: Friday, July 23rd
Details about these and other special Friend events will be posted in the Spring issue of the *Dispatch*!

- SS1: Special Session, 3/21-3/25:** CRF
Project 1115: Pullman Sleeper 470
- SS2: Special Session, 4/3-4/7:** CRF
Project 1115: Pullman Sleeper 470
- SS3: Special Session, 4/17-4/21:** CRF
Project 1115: Pullman Sleeper 470
- A-Session:** 5/15-5/21
Project 1370: Right-of-Way and CRF
- B-Session:** 5/24-5/28: CRF
Multiple Projects
- C-Session:** 6/14-6/18: Chama and CRF
Multiple Projects
- D-Session:** 6/21-6/25: Chama and CRF
Multiple Projects
- SS4: Special Session, 7/19-7/23:** Chama
Project 1336: Repair, Stock Car 5691
Project 1351: Convert P-Boxcar 207 to Rider Boxcar 3417
- SS5: Special Session, 8/16-8/18:** Antonito and CRF
Project 0785 OB & OP Crew Training
- F1-Session:** 8/19-8/24: Antonito and CRF
Project 1364: Friends Support of 50th Anniv. Celebration and Project Demonstrations
- F2-Session:** 8/24/8/29: Chama, Antonito and CRF
Project 1364 Friends Support of 50th Anniv. Celebration and Project Demonstrations
- G -Session:** 9/24-9/28: CRF, Multiple Projects
Close-Down, Chama and CRF

IMPORTANT: Registration for scheduled work sessions begins April 1, 2021, **not before!** Prior to that date we will be adapting the schedule to the COVID restrictions. The office will return any registrations received prior to the start date!

To all the Work Session volunteers:

Thank you for taking time to attend a work session this year. 2020 has been challenging. Still, with a myriad of pandemic restrictions, the Friends volunteers accomplished an amazing amount of work. Many of you spent four-months on the reconstruction of the Cumbres Car Inspector's House from its start in June to its to near-completion in September. The Colorado Springs Work Site completed restoration of Pullman Sleeper Car 470, including transport to the CRF, the culmination of an 11-year project, for the fitting of shop-built period trucks. Other projects included Caboose 05635's restroom upgrade, re-decking Flat Car 6314, installation of a wheel press, reinstallation of the stock-pen fence at Osier and continuing work on a number of other projects. Just fantastic!

It will be another austere year for the C&TS so we are once again asking for your help. Please consider continuing your volunteer efforts in support of the C&TS in 2021.

May you and your family stay safe and healthy and enjoy the holiday season.

Again, thank you!

John Engs, Projects Committee Chair

"Scratch Building" in 1:1 Scale

by Ian Kelly

Photos by Don Atkinson, Chris James and the Friends' Chronicle Team



Ian Kelly at work on one of the Cook Car 053 trucks. See identification of various parts of the assembly on page 9.

In model railroading, the term “scratch building” is the process of creating a piece of rolling stock “from scratch,” as opposed to building something from a commercial kit. When scratch building, you assemble the assorted raw materials and create a finished model on your own that is realistic to your needs and the time period of your layout with little outside assistance. Scratch building takes a fair amount of skill and patience but the results are well worth it; you are creating something that is unique to your railroad layout and not available anywhere else.

Scratch building isn't necessarily restricted to scale model railroading and the Cumbres & Toltec is no model railroad. It exists in 1:1 scale: twelve-inches-to-a-foot. While it doesn't happen often, the Friends of the C&TS have the talent, skill and patience to “scratch build” railroad equipment that, like on a model railroad, can not be acquired in any other way, and make those pieces fully operational and historically accurate to the Railroad's time frame.

One of the more difficult and complicated projects the Friends have undertaken in recent years is the creation of three pairs of replica trucks for use under three cars currently under restoration by the Friends. The Friends are not really in the business of building new or replica anything, as our projects and our mission normally encompasses repairs and restorations. Building replicas? For us, that's very different. The Friends are currently building an accurate replica of the Car Inspector's House on Cumbres Pass, not unlike building any house. Building a replica structure is

one thing. Creating historically accurate, working parts for rolling stock is a whole other story.

When the states of New Mexico and Colorado purchased the Railroad in 1970, there were no passenger cars included in the sale—they had all gone to the Durango & Silverton. C&TS rolling stock consisted of freight cars with freight trucks. One of the mandates of the C&TS—and the Friends—is to present historically accurate rolling stock as part of the Railroad's “living museum,” but we had no trucks for passenger cars and similar rolling stock.

This project began with an opportunity to acquire some castings of truck pedestals and journal boxes that had been cast for a subsequently-abandoned project. Ultimately,



Welding on one of the two flying bolsters.



With the welding done, welds are ground to perfection.

three pairs of trucks were planned: a pair for the Pullman Tourist Sleeper 470, a pair for Cook Car 053, and a pair for Railway Post Office Car 65. The trucks for 470 and 053 are of a similar design—oak with ¼-inch steel sides on the sills. The original RPO trucks would have been of cast steel construction but as that wasn't possible, they were fabricated from welded steel plate. Fortunately, we have some top-class welders amongst the Friends volunteers.



Additional bracing was placed on the corners of the 053 truck.

Leaving aside the RPO trucks, oak for 053 and 470 was acquired and cut to the correct dimensions by Craig McMullen in his workshop in Colorado Springs. We did have *some* of the Pullman drawings, but they only take you so far. Bear in mind that the 470's Pullman trucks date from 1889 and we



Chuck Dueker prepares to drill mounting holes in a pedestal.

didn't have a *complete* set of drawings. Having worked in the drawing office of British Railways Workshops back in the 1970s, I was well aware that what the drawing office designed did not always translate into practice.

I joined this project in 2013. Russ Hanscom was the team leader and driving force behind the project. He had already done an amazing amount of research with drawings from The Pull-

man Company, the Colorado Railroad Museum, and the Durango & Silverton Railroad. He created many parts in his home workshop.

Along with the inherited pedestals and journal boxes, there were many additional castings involved in building the trucks. The late John Weiss was a major help in making patterns from which casting molds were made, as well as supervising the final casting of each part.



Pedestals attach to the frame.

Over the course of several years, we amassed a large number of parts and by 2018, it was time to start assembly of the 470 trucks. This went well and by the end of 2018, we had complete frames ready for pedestals and wheel sets. Work in 2019 included assembling the pedestals and wheel sets with



Top: Truck assembly has moved outside the CRF. Bottom: Assembly complete, the frame awaits wheel sets.

the equalizer bars which unfortunately didn't fit! The drawings were wrong, and they had to be re-cut. This was very frustrating, but eventually everything went together. Then it was the tedious job of adding locknuts to every single bolt and tightening everything down; there are some 120 bolts in each truck so it took a while. Brad Lounsbury painted the trucks once the September snow had melted and we had two rolling trucks ready for the 470 car body to arrive. The body had been lovingly restored and painted in the Friends' Colorado Springs shop, a restoration process that took eleven years to complete.

The day came in late September of 2020 when the car body arrived from Colorado Springs and was craned onto the



Above: The completed frame and pedestals are lowered onto wheel sets. Below, left: Journal boxes are fitted into the pedestals.



waiting trucks. I had made temporary spacers to sit on top of the trucks; at that point we didn't know what the correct distance between the car body and trucks would be, crucial when figuring out the correct height of the coupler above rail level. Fortunately, the temporary spacers worked and the car didn't fall over. It was then rolled very carefully into Antonito's Ed Lowrance Car Repair Facility (CRF).

Once we had taken measurements and figured out the height of the spacers on top of the bolster, the car body was lifted up and placed on stands without the trucks for installation of brake components and finishing details. Like



Russ Hanscom uses a shop-built invention to compress the leaf springs for installation on one of the RPO trucks.



A bolster is lowered into place on a truck for Pullman 470.



The late John Weiss patterned and cast nameplates for the D&RG and Pullman trucks.



Michael O'Nele nudges 053's flying bolster into place.



Painted, the final height of 470's bolster still needed adjustment.

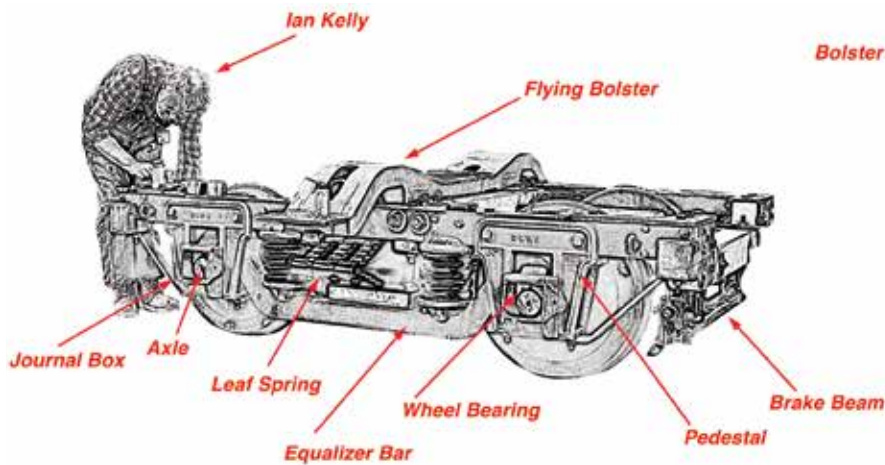
the trucks, the brake system is being built from scratch, a work-in-progress led by Bill Kepner.

The Friends and the Railroad plan to have Pullman 470 ready for "revenue service" by Opening Day, 2021. The complete story of the eleven-year restoration of Pullman Sleeper 470 will be presented in the *C&TS Dispatch* this coming year.

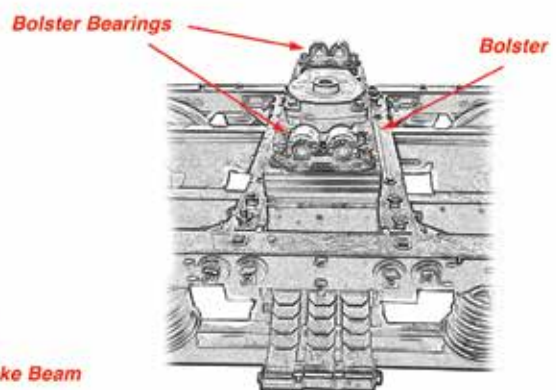


Completed, 470's trucks are ready to roll! Some of John Weiss' casting patterns adorn the far wall of the CRF.

Ian Kelly discovered the C&TS as part of the Hollywood crew filming *Indiana Jones and the Last Crusade* in 1988. Years later he returned as a volunteer at the Friends' Ed Lowrance Car Repair Facility in Antonito, Colorado. He travels from California each summer in his 1962 Land Rover Dormobile, "newer than a K-36 and only slightly faster." Ian was elected to the Friends Board of Directors in 2019.



Truck for COOK CAR 053 with later-type Flying Bolster



Truck for PULLMAN SLEEPER 470 with early-type Bolster

Along with about 120 nuts, bolts and washers, there are dozens of individual pieces in each of the three pairs of trucks.



Far left: bisbeeminingandminerals.com Left: Library of Congress Above: Judson Powder Box, halslampost.com, used with permission

Powder Magazines on the Cumbres & Toltec

by Chris James, with powder magazine data from docents Rich Muth and Hank Morris

There is no doubt that building a railroad through the San Juan Mountains in 1880 was a hellish job. Lacking heavy, diesel-powered hydraulic shovels and massive earth-moving equipment, the stalwart men who built the San Juan Extension had little more than muscle and mules to punch through the rugged countryside. Still, the workmen did have one advantage up their rolled-up sleeves: explosives. But that began long before the Railroad.

Gunpowder was invented in China in the 9th century and its use spread throughout Eurasia for everything from medicinal purposes to, of course, warfare. According to historians, the use of gunpowder for breaking rock was first utilized in Hungary in 1627.

"This first blast was a simple affair—a mining engineer stuffed gunpowder into some crevices in a [mine] tunnel's working face and ignited the explosive with a primitive fuse. The shot, although undoubtedly only marginally effective, proved reasonably successful."

Blasting was still difficult. Hand-steel drilling in the rock to place the gunpowder was slow and tedious and the gunpowder was often poor quality. It wasn't until the 18th century that primitive mechanical drilling technology was invented. Mechanized drilling, however, did not lessen the risk to the miners down in the hole where the fuses to set off the charges might consist of "chains of goose quills and lengths of powder twisted in paper."

One of the most significant advances in blasting technology was the Miner's Safety Fuse, invented in 1831. The fuse wound several layers of twine around a gunpowder core. The ingenious quarter-inch cord, protected against water with a coating of varnish, could be cut to any length to give

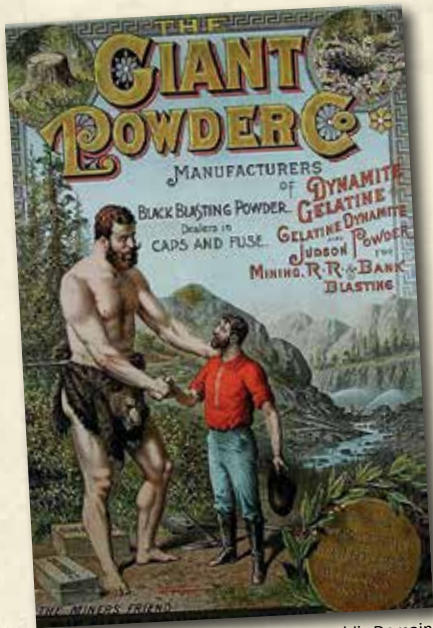
a predictable burning rate and a greater margin of safety for the miners, allowing them to escape a safe distance from the blast.

In 1843, 18,000 lbs. of gunpowder was used to remove a 400 foot high chalk cliff as part of Britain's South Eastern Railway. About 400,000 cubic yards of chalk was displaced, saving the company an estimated six months of labor and £7,000 in expense.

But with the advent of the Industrial Revolution in the early 19th century, there was an increased need for coal and iron and a more efficient way than blasting with gunpowder was needed. Gunpowder was great for firearms but lacked the punch to break rock that was harder than the chalk cliffs along the South Eastern Railway. Gunpowder was also prohibitively expensive for the quantity needed for the expanding mining industry.

By refining the gunpowder recipe, it was found that "black powder" was easier and less expensive to make in large quantities which, when applied to the mining industry, became known as "blasting powder." Later a more specific variety of black powder, created by combining finely-powdered sulfur, charcoal and saltpeter at a specific ratio, became known as "mining powder." It was classified as a "low explosive" as it only exploded when used in a confined space such as a drill hole.

In 1868, not long before the beginning of construction of the Denver & Rio Grande, dynamite, "a putty-like mass of nitroglycerine in a combustible absorbent wrapped in a waxed paper cartridge," was introduced by the Giant Powder Company of San Francisco. By the mid-1870s it was so common that any dynamite product became known as "giant powder."



Public Domain

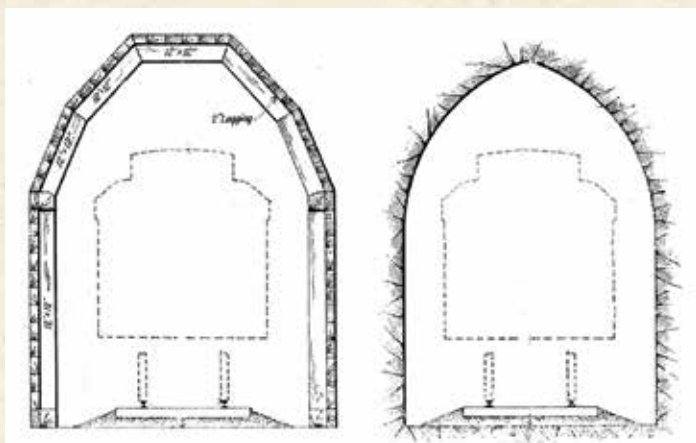
Dynamite was different from gunpowder and black powder in that it exploded without combustion. A chemical reaction would detonate the dynamite and release gases over 500 times their original volume.

The result was that hard rock wasn't just blasted, it was shattered, and the product became known as a "high explosive."

However, black powder did not go away with the advent of dynamite.

Egbert Judson, one of Giant Powder's founders, experimented with a different formula that exploded faster than black powder but slower than dynamite. It worked especially well in ground with an inconsistent mix of rock, broken sedimentary rock and loose sediment often found close to the surface, not in the hard rock of underground mines. Judson patented "Judson Powder" in 1876 and it became so popular for railroad construction that it soon became known as "railroad powder" and was produced by a number of manufacturers.

"Railroad powder" was most likely the explosive used for much of the San Juan Extension in 1879-1882 for several reasons: the terrain of the San Juans was a mixed bag of volcanic tuff and loose and hard rock, all close to the surface, perfect for "railroad powder."



Engineering News, September 27, 1894 Public Domain

Tunnels through soft rock like Mud Tunnel on the C&TS (an example on the left) could often be blasted with "railroad powder, though they usually needed extra timbering. Solid hard rock tunnels, like Rock Tunnel (an example on the right) might be blasted with dynamite with little extra cribbing.

The second reason was economic. "Railroad powder" was less than half the price of dynamite. To get to Silverton, the Denver & Rio Grande was building the San Juan Extension fast and cheap and General Palmer and his engineers

probably decided that "railroad powder" was the best choice for both the terrain and Palmer's often meager funds. In harder rock, such as found in Rock Tunnel, more traditional dynamite was the likely choice.

Unlike powder, dynamite doesn't ignite with a fuse; it needs a shock to start the chain reaction that sets off the blast. The solution was the introduction of "blasting caps" or "detonators." The cap is buried within one or more sticks of dynamite. An electric charge sent through a long pigtail of wire provides a small explosion of the cap which then results in the much larger explosion of the dynamite itself.

Early on, miners with powder and fuses discovered that with different lengths of Miner's Safety Fuse a sequence of timed explosions, beginning in the center of the blast face with each successive shot going off a fraction of second later, would cause the later shots to collapse inward, maximizing the efficacy of the shot. Blasting caps with millisecond delay times are still used in modern blasting with the same result.

Because railroad powder, dynamite and blasting caps were inherently dangerous, they were generally stored in what became known as "powder magazines," even though powder, *per se*, was not always used. The powder magazines were generally built near or close to the blasting site so the dangerous contents didn't have to be transported over long distances.

In the 19th century, any structure built away from civilization relied on local materials found on site, and powder magazines constructed along the San Juan Extension were no exception: the structures were built with stone and timber. Concrete bunkers were a later development when the heavy raw materials could be transported more easily but nothing that robust is known to have existed along the route between Antonito and Chama.

We are fortunate on the Cumbres & Toltec to have two original powder magazines along the right-of-way, one at Cresco and another at Sublette. There is evidence of a third at Osier. Little of their actual history is known, so much of what has been recorded is conjecture. Still, to recognise these pieces of the past is an important addition of the Cumbres & Toltec Scenic Railroad's historical record.

Docents **Rich Muth** and **Hank Morris** have sought out and photographed each of the three sites and detail them below:

Cresco

Walking due south of the tracks about 40 yards from about Mile 334.8 (uphill from the Cresco tank) reveals a pair of concrete pedestals. One has a threaded rod about six inches long sticking out of the top. Walk a few yards further and there's a second concrete pedestal about 18



inches square and about that high. On top of the second pedestal is a six-inch-diameter pipe about two feet high with a screw-on cap secured by a lockable hasp.

According to long-time C&TS employee Earl Knoob, the pipes were

used to store blasting caps (detonators) safely away from the main explosive storage magazine. The reason for the pedestal with the threaded rod and no pipe is unknown, though it may have held a second pipe in the past. While the powder magazines themselves may date from the construction of the Railroad, the pipe blasting cap storage



pedestals probably do not, as they show evidence of welding; both arc welding and gas welding were developed after the construction of the Railroad.

The presence of welding supports the idea that the



Railroad was probably built with “railroad powder” and Miner’s Safety Fuses instead of dynamite, a combination that didn’t necessarily require the two components to be kept separated at a safe distance. Once the Railroad was completed and dynamite and blasting caps were more common, the addition of detonator storage at a later date, each with a screw cap and a welded hasp, would have been a necessity for safe storage. At what date they were added is unknown.

The ridge with the two pedestals drops off sharply a few yards beyond the second pedestal. Walking around the side of the ridge and moving under the drop-off reveals the old powder magazine. The entrance is about three feet tall, and the interior looks to be only about four-by-five feet. It has no door.

Sublette

The most substantial powder magazine on the Railroad is found at Sublette. A bit of hiking is required to access

the magazine from the Sublette Section House. The magazine is a couple of hundred yards southeast of the Section House, down the hill and then over another rise.

It can briefly be seen from a westbound train shortly after passing the first small hill on the left adjacent to the tracks. An easier way to access the magazine is by walking due east from the south end of that hill and following the contours for about a hundred yards.



The magazine is about nine feet square, and the roof is high enough for a person to stand upright. The heavy timber door has a metal-covered pass-through hatch. Walking into the magazine one sees the roof, unlike the walls, is not stone. The room is constructed so that in case of an explosion the roof gives way, directing the blast upward. The resulting repairs are simply to replace the roof. Ever heard of “blowing up” or “blowing your top”? According to docent Rich Muth, this type of magazine construction is what spawned these common phrases.

About twenty or thirty yards east of the magazine is a

large pine tree with a sign on it. The paint is faded badly, but a little concentration reveals “EXPLOSIVES KEEP OUT.” Under the tree is a concrete pedestal similar to the one



at Cresco with the six-inch pipe topped with a screw cap and hasp. Here, too, the probable storage of blasting caps was placed far from the main magazine.

There is no second pedestal with a threaded rod as at Sublette. The magazine can be dated to the building of the Railroad. The date of the addition of the welded screw-top pipe is unknown.

Osier

In the Friends’ Dorman Collection of historic photographs there is an image labeled “Dynamite cache and tank in background, Aug. 20, 1950.” The photo is taken from the vicinity of the tracks looking easterly across Osier Creek toward the Osier tank and buildings. The photo shows a ring of rocks and a sign. Today, this configuration, less the sign, is easy to spot from the train as it approaches Osier from the west.



The site is easily accessed from the tracks. It is about fifty yards toward the Osier Tank, down a gentle hill. At the site is a concrete pedestal similar to the ones at Sublette and Cresco. But this time there is no pipe sticking up from the top. There is a concrete plug wrapped with what looks like an iron pipe, with pieces of the pipe bent outward from the plug. The arrangement looks as if a once-intact pipe like those at the other two sites experienced a forceful explosion that blew the pipe sides outward like a flower. Laying



Dynamite cache, Aug. 20, 1950. Photo by Robert W. Richardson *FCTS Dorman Collection RD014-055*

nearby is a screw-on pipe cap with a hasp like those seen at Sublette and Cresco.

An extensive search of the area between Osier Creek and the tracks has failed to reveal any sign of a powder magazine. There is one location just north of the exploded pipe with another larger ring of rocks that may have been some type of storage site, though there is no evidence of a structure. All that is within the rock circle is a slight depression.

But with the Railroad completed, what’s the need for dynamite and powder magazines at all? Once again we turn to Earl Knoob, who says while blasting might have been used during the 20th century to clear snow slides, the main use was to simply clear fallen rocks from the tracks. Rockfall along the line has always been a problem. While large falling rocks are pretty rare in the summer, winter and spring are a different matter. Even in modern times, as soon as the line is clear enough to get motor cars over the road, crews go on a “rock shooting” expedition. Knoob, who worked for the Railroad until 1997, says, “I went on these a few times early in my years. It was quite fun... We [found] a nice big rock about four-feet around squarely on the rails just west of Rock Tunnel. Shooting that made a heck of an echo down the canyon!”

Because Sublette was one of the last occupied section houses, Knoob believes the powder magazine and cap storage was probably used into the 1960s.

Today the powder magazines and the accompanying blasting cap storage pipes along the Cumbres & Toltec Scenic Railroad are a reminder of just how difficult it was to build and maintain a narrow gauge railroad in the Rockies. Preserving and interpreting them adds to the colorful historic tapestry of the Railroad.



Rich Muth is the Manager of the Docent Program for the Friends. **Hank Morris** has been a docent since 2008.

Historical information and quotes within the story were sourced from *Blown to Bits in the Mine: A History of Mining and Explosives in the United States* by Eric Twitty, Western Reflections Publishing Co., 2009. The authors wish to thank Eric Twitty for his kind assistance.

Story and Photos by
John Russell

Alamosa: Three Visits, Thirty-six Years

In 1877, Alexander Cameron Hunt, President of the Denver & Rio Grande Railway and the former Governor of Colorado, selected a site at a bend of the Rio Grande River to establish a railroad hub in Colorado's San Luis Valley. The Railroad arrived on July 4, 1879, and the town of Alamosa, the Spanish word for the cottonwood trees that stood beside the river, arrived soon thereafter. It "arrived" rather than being "built," as the first structures, stores, churches and houses were transported by D&RG flatcars from the previous railhead at Fort Garland, twenty-five miles to the east. It is said that Joe Perry of the Perry House, "served his guests a big breakfast in Garland City; that night he served them supper in the same building in its new Alamosa location." Unlike Rome, Alamosa was, in fact, "built in a day." Or, at least the beginnings of it.

Ultimately, the new railroad hub had Denver & Rio Grande narrow-gauge tracks spreading out in four directions: east to Walsenburg, south to Antonito and Santa Fe, north to Salida and west to Creede. For much of the next century, Alamosa remained the heart of narrow-gauge railroading in North America.

My own railfan encounters with Alamosa involved not one day, but three days, spanned over thirty-six years.

My earliest visit to Alamosa occurred in the middle of a gypsy-like 2,000 mile journey in 1958. As a 17-year-old, I had spent the summer in Monroe, Louisiana, and was working my way back to home in Montana. I can't exactly guess how I—a naive, wayward teen—even survived that rigorous odyssey. The transportation for my winding journey home included one segment on a passenger train. The rest of the trip was a combination of rides aboard buses and boxcars.

I had been a fan of railroads and steam locomotives since the age of twelve. The summer of 1958 was

Left: I photographed D&RGW K-36 488 occupying the dual-gauge turntable at the Alamosa roundhouse in the bright morning sun, September 16, 1964. In the background, standard-gauge GP7 5104 supervises from a lead track.





1958 Top: K-37 2-8-2 492 rides the turntable in Alamosa. Bottom: In the Alamosa engine terminal, a hostler fills 492's tender from a standpipe, then the locomotive heads for the coaling station.

probably the last year when working steam in any quantity could be found around the United States. In my travels, I admired steam in revenue service in Fort Worth and Childress, Texas, plus Denver, Cheyenne and Laramie.

During that trip I also saw a number of engines in dead lines and recorded many of them on film, sadly aware that most would never see service again.

On the 26th of August, 1958, in the middle of my pilgrimage, I stepped off a bus in Alamosa. It took me little time to find the D&RGW's dual-gauge yard. Even now, sixty-two years later, I still recall my teenaged railfan's wonder; I'd never seen a narrow-gauge operation. I felt as if I had stepped into a rail fairyland.

That day, nine three-foot Mikados were at Alamosa,



1958: D&RGW 2-8-2s 488 and 498 are dead at Alamosa. Six years later, I found the same pair under steam.

along with Rio Grande Southern No. 42, a 2-8-0 Consolidation. One Mike, K-37 492, was under steam. I shot about three dozen photos of 492's movements about the terminal. I also photographed 488 and 498 coupled together, but cold. Perhaps it was a prescient coincidence as six years later I would discover the pair joined again, this time under steam.

Six years passed and it was September, 1964. Now age twenty-three, I had driven from Missoula, Montana, on a rail enthusiast's vacation, a trip that featured a number of scenes that my excitable young eyes deemed highly memorable. I was able to photograph UP's 4-8-4 844 during an excursion across Wyoming; I also visited other steam at-



1964: The five bays of the standard-gauge section of the Alamosa roundhouse, bigger and better lit, have been modified to accommodate the almost-daily maintenance of the narrow-gauge locomotives, something the standard-gauge locomotives rarely need. Three have been converted to narrow-gauge, one remains standard and one is dual-gauge. The other stalls from the original slim-gauge days are still standing to the right of the brick structure during my 1964 visit.

tractions in that state, plus the Great Western enginehouse in Loveland, Colorado.

Alamosa lay in the approximate middle of my trip. I rented a second-floor motel room and from two blocks away I could hear an occasional whistle and the chuffs of a slow-moving steam. I could even catch the aroma of coal smoke. I could barely wait for the morning to photograph operating narrow-gauge steam.

At full light, lugging a bulky camera bag, I hurried to the D&RGW roundhouse. Now, aside from the few steam highlights I had uncovered previously on this vacation, some years had passed since I had been able to watch steamers moving about under their own power or see cold locomotives on a dead line.

Under steam on this Wednesday, September 16th of 1964, were the same two three-foot-gauge Mikes: K-36 488 and K-37 498, that I'd seen coupled and cold six years earlier. I learned that they were slated to doublehead a freight west later that day. As hostlers moved the pair off the turntable, then coaled and watered them, I snapped dozens of photos awaiting their westbound departure, some showing the narrow-gauge steamers consorting with standard-gauge diesels. The grin rarely left my face for three hours.

The roundhouse itself had received an interesting treatment sometime after my 1958 stopover. The five large standard-gauge bays had been overhauled to better serve three-foot motive power. Three bays now accommodated narrow-gauge, one was dual-gauge and just one remained

standard-gauge. I presume the former standard-gauge section of the roundhouse, with its high ceilings and big windows, afforded better lighting and more room for maintenance compared to the cramped, dirt-floored stalls of the narrow-gauge portion.

Of course, 488 and 498 were far from the only steamers at the Alamosa engine yard that day. I found 480, 497 and 499, along with 487 and 493, which had arrived from the west as a doubleheader the night before.

Outside on the leads and storage tracks sat eight more Mikes: K-36s 481, 482, 486 and 489 along with K-37s 490, 491, 494 and 495. Sadly, 490 was a woeful case, the front of her smokebox was gone and her running gear was missing. Perched miserably atop narrow-gauge Flatcar 6748, her scrapping date was near.

In the backshop sat yet another narrow-gauger, K-36 483, its drivers removed and resting on standard-gauge dollies. Like several Mikes at Alamosa that long-ago September, 483 would eventually go to the C&TS.

As the sun climbed to its zenith, a hostler would occasionally shuffle one of the two locomotives to a new position in the engine terminal. All



1964: Scheduled to doublehead a westbound train with Locomotive 498, a hostler backs 488 from the dual gauge turntable.

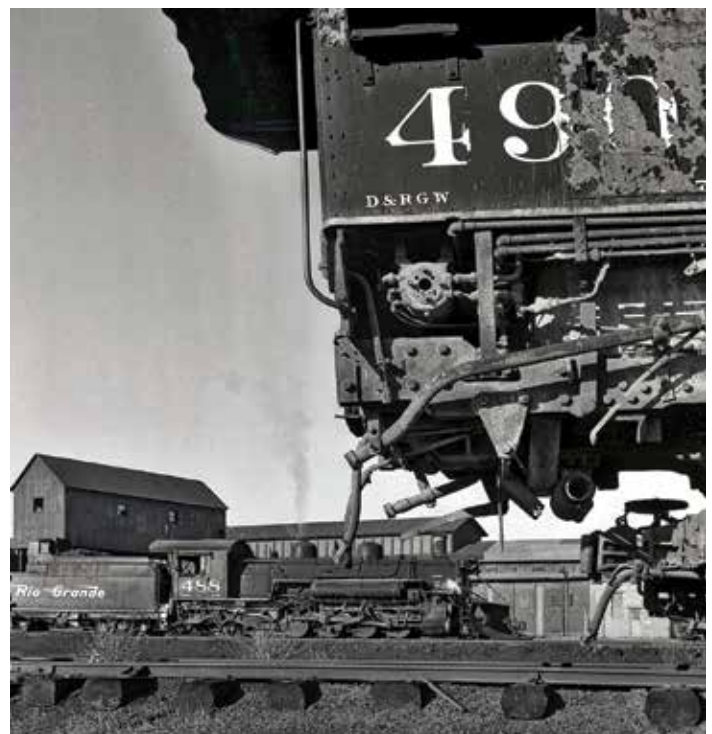
morning I was happy enough to roam the terminal, snapping photos. Even today, why the D&RGW allowed me to wander about its property so freely—no threat of arrest for trespassing or even a need for a signed release—remains an open question.

But when, I wondered, would the pair couple up and take their train out of town? The serendipity of my visiting steam's narrow-gauge citadel on a day when I could blissfully chase and photograph a doubleheader was not lost on my young mind.

Finally, more movement! A hostler was climbing into 498's cab and eased her onto the dual-gauge turntable which then swung toward a roundhouse stall. The 2-8-2 rolled slowly inside. A worker clad in overalls was nearby. "What's going on?" I asked. "The freight run; what are they doing with its locomotives?"

"The trip has been postponed until next Monday, I guess." But this was Wednesday. Darn! My dreams of getting to photograph a revenue steam doubleheader had been popped. My meager funds would not support a five-day wait and, in any case, I had to be back to work the following week.

I consoled myself with the feeling that this visit had been far from a total loss. I had been able to document live



1964: The remains of K-37 490 rests on a flatcar while K-36 simmers in the background. Minus its running gear, the dilapidated 470 is destined for the scrapper's torch.



1964: K-36 488 and K-37 498, the same two locomotives I saw cold in 1958 are now under steam, paired for a scheduled westbound doubleheader. Unfortunately, the run was postponed for five days and the locomotives were once again tucked back into the roundhouse to await the rescheduled freight.

narrow-gauge steam, a number of stored locomotives and historic steam facilities. I snapped a few more pictures and then, reluctantly, I left for the next stop on my pilgrimage. The day had not concluded as I had anticipated but then again, how many other locales in the U.S. could I have visited in 1964 to see operating steam? Few indeed.

Another thirty years plodded past. On September 22nd of 1994, my wife and I rode a doubleheader on the C&TS out of Chama behind 489 and 497. We learned that a triple-



1994: The last remnant of the D&RGW's once-extensive engine facilities is the standard gauge section of the roundhouse. The shops and the narrow gauge portion of the roundhouse have been leveled. Even this fragment would soon be gone.

header was scheduled for the following day. We stayed over and I got many shots of that operation also.

Two days later, on September 24th, I visited Alamosa for the last time. It's fair to say that I encountered much less

activity than I had three—and four—decades earlier.

In fact, there was none.

Of the extensive facilities I had explored in 1964, just one portion remained, the five-stall standard-gauge section of the roundhouse itself. Everything else—the backshops, the larger narrow-gauge segment of the roundhouse, the coal and water facilities—had all been leveled. The Mikados were long gone too, though only from Alamosa. Blessedly, thanks to the efforts of organizations such as the C&TS, most of the locomotives I saw on my first two visits to Alamosa remain in operation today. On our visit to Chama, I saw several of them in the yard and shop.

Two days later in Alamosa, all I saw was the two standard-gauge tracks that still entered the left-over roundhouse by way of the filled-in turntable pit area. I stepped from my car, snapped two 35mm photos, turned around and left. Not long after that, I read that the last portion of the Alamosa roundhouse was slated to come down.

During my 1964 vacation I had captured on film a good number of steam images. But no experience on that journey transcended the morning I was privileged to spend at Alamosa's roundhouse in the company of those steam three-footers, 488 and 498. I will always have those lasting images from 1958 and 1964 and that youngster's first, unforgettable memory of stepping wide-eyed into a slim-gauge railroad wonderland.

After a stint in the Navy, **John Russell** worked as an auto mechanic and earned a Bachelor's Degree in English from the University of Montana. He was employed as a technical writer for both the University and, later, the Bureau of Land Management in Montana. The author of a number of short stories and an adventure novel, *The Bitterroot Marathon*, he is now retired and resides with his wife of fifty years, Carol, along with their three cats in Missoula, Montana. Still an avid railfan, John has been a member of the Friends of the Cumbres & Toltec since 1995, "or thereabouts."



HISTORIC PRESERVATION ON THE C&TS, 2020

SESSION G (SEPTEMBER 23-27)

AND SPECIAL SESSION 17 (OCTOBER 26-30)

Photos by Tim Smith, Don Atkinson, Sharon McGee, John Engs and the Friends Chronicling Team Members. Photos included when available. Team member names are taken from Team Leader Reports in FIDO when available. Volunteers not mentioned were not provided in Team Leader reports. We apologize for the omissions of photos or team members.

ANTONITO, COLORADO: ED LOWRANCE CAR REPAIR FACILITY

Proj. 0311: Site Leader and Safety Coordinator (see also SS17)



Once again **John Engs** supervised the projects taking place in the Ed Lowrance Car Repair Facility in Antonito. John also served as Safety Officer overseeing not only the safety in the shop but also the COVID-19 testing for members' health and welfare.

Proj. 0779: Mechanical Maintenance (See also SS-17)



Normally mechanical maintenance is performed on a number of pieces of rolling stock, focusing primarily on brake systems and air lines. In Session G, work was centered around the continued set-up of the donated Wheel Press that was placed at the east end of the CRF.

The mechanical maintenance team was led by **Chuck Dueker**.

Proj. 1115: Pullman Sleeper 470, Antonito CRF (See also SS-17)

On the interior of Pullman Sleeper 470, crews did some last minute touch-up and installation of the incredible woodwork created in Colorado Springs, readying the car for passengers next summer.



Proj. 1197: Building Period Trucks for Passenger Cars



Ian Kelly continued his work on the replica passenger trucks, something he has done since 2013. During Session G, he removed and refitted the brake operating levers from the trucks, bending them to avoid conflict with the coupler mountings and modified the brake lever supports to adjust for the modified brake operating arm.



He also designed metal spacers for the trucks to add weight and for coupler height adjustment, adjusted and checked the brakes so the brake shoes would clear the wheels, and fitted brake linkage. See also page 6.



Proj. 1304: Restoration of Stock Car 5774



Proj. 1354: Restoration of Speeder MW-02

Jim McGee, Marshall Smith and Bob Brigham continued work of the wonderful and strange MW-02 Speeder. The body was disassembled down to the floorboards and much of the mechanical equipment was either inspected or removed.



Proj. 1363: Restoration of Idler Flatcar 9569

Flat Car 9569 was originally going to be rebuilt by students at Sandia High School in Albuquerque. That project died on the vine so the disassembled car and loose parts were returned to Antonito to be converted into an Idler Flat was used between loads of pipe shipped over the in the 1940s and 1950s.



Chuck Dueker supervised a number of folks in the final disassembly of the car. Eventually, the Flat Car will receive all new wood and refurbished brake and coupler assemblies.

It will be used on realistic historic photo trains in the future.



SPECIAL SESSION 17 AFTER SESSION G, OCT. 26 - OCT. 30

Special Session 17: Pullman Sleeper 470 Finishing Touches

When Pullman Sleeper 470 arrived from the Colorado Springs shop in October, its interior and exterior restoration was basically complete. However, the Springs shop was not equipped to install the assorted safety hardware and other under-the-car appliances.



Upon delivery to Antonito, the car was moved into the CRF building, placed on jacks and the new trucks removed.



This allowed team leader **Bill Kepner** and crew to work on the underside of the car, designing and building the brake system, including the air tanks and all the brake lines.

FRIENDS SERVICE AND SUPPORT

NUTS, BOLTS & TOOLS

Project 0245: Nut, Bolt and Tool Room Operation



As always, **Marshall Smith** was the king of the Tool and Bolt Room. With the expanding scope and complexity of the projects at the CRF, the tool and bolt needs have expanded as well, but Marshall seems to take it in stride.

HAULING AND VEHICLE OPERATION

Project 0294: Equipment Hauling and Vehicle Operation



Bob Reib can be found almost anywhere around the Railroad property. If he's not assisting one of the Work Session teams with an extra set of hands, he's driving equipment around the property or headed for tools, equipment or other supplies.

A LITTLE SOMETHING EXTRA: WHAT THE HECK IS IAN KELLY DOING?



Ian Kelly: "This is a tool I made to check the clearances for the bolster pins on Pullman 470. The pins are two feet long and it takes 25 minutes per cut in the lathe. The tool has a short round section on the end which I turned down in stages. There's several holes in a line from the floor on down and several are inaccessible. The tool gives a 'go/no go' indication of the actual diameter. They should be 2" diameter but in fact turned out to be 1.84" at the 'B' end and 1.81" at the 'A' end.

"The 'builder's plate' that covers the access hole is not the original from Pullman 470 but is from a similar



car of a similar vintage. Nonetheless, it is an amazing additional detail on an amazing passenger car."



Ted McKillip Norcross 1941-2020

It is with great sadness that we announce the passing on December 3rd of Ted Norcross, a thirty-year devoted Friends volunteer and an outstanding leader. His team was known as *The Square Nail Gang*, as everything the team worked on was put together with square nails.



Photos courtesy Bill Kepner

For more than two decades Ted (*a.k.a.* the Slave Driver) and his team were responsible for many outstanding accomplishments in the reconstruction and restoration of the section town at Osier. These historic structures and reconstructions are now enjoyed by all who ride the rails.

You always knew when Ted was on the job; seeing his pipe and coffee cup, you always knew he was not far away. Several times he would misplace his cup but never worried about it being taken as he never washed it. He said it made the coffee taste funny.

The last project that Ted was involved with was the structural roof replacement on the Lava Pump house.

He will truly be missed, especially by those who have had the pleasure of working with him.

The family has asked that in lieu of flowers, donations can be made to any of the following organizations: Friends of the Cumbres and Toltec Scenic Railroad, cumbrestoltec.org; Mid-South Live Steamers, midsouth-livesteamers.com; or the Stecoah Valley Center, stecoahvalleycenter.com.

A full memorial is available at:

<https://crispfuneralhome.org/tribute/details/2069/Ted-Norcross/obituary.html>

~ John Engs

Friends of the Cumbres & Toltec Scenic Railroad, Inc. Statement of Financial Position December 31,

	2019	2018
ASSETS		
Current Assets		
Cash & Cash Equivalents	\$ 627,172	\$ 568,912
Receivables	\$ -	\$ 29,306
Inventory	\$ 16,341	\$ 19,310
Prepaid Expenses	\$ 27,457	\$ 16,098
Total Current Assets	\$ 670,970	\$ 633,626
Property, Furniture & Equipment - Net	\$ 584,537	\$ 573,811
Investments, Unrestricted	\$ 388,911	\$ 21,085
Investments, Permanently Restricted	\$ 90,150	\$ 89,650
Collections	\$ 340,212	\$ 272,646
TOTAL ASSETS	\$ 2,074,780	\$ 1,590,818
LIABILITIES & NET ASSETS		
Current Liabilities		
Accounts Payable and Accrued Expenses	\$ 40,940	\$ 38,377
Deferred Revenue	\$ 105	\$ 2,000
TOTAL CURRENT LIABILITIES	\$ 41,045	\$ 40,377
Net Assets		
Designated For Future Operations	\$ 250,000	\$ -
Unrestricted	\$ 1,267,415	\$ 997,278
Temporarily Restricted	\$ 516,320	\$ 553,163
TOTAL NET ASSETS	\$ 2,033,735	\$ 1,550,441
TOTAL LIABILITIES AND NET ASSETS	\$ 2,074,780	\$ 1,590,818

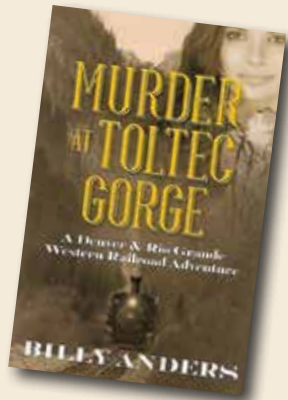
Friends of the Cumbres & Toltec Scenic Railroad, Inc. Statement of Activity December 31, 2019

Support and Revenue	
Grants and Contributions	\$ 860,031
Member Dues	\$ 164,536
Work Sessions and Merchandise	\$ 76,719
Investment and Interest Income	\$ 6,622
Other Income	\$ 1,125
Charters net of expenses	\$ 1,050
Reimbursed by Commission	\$ 287
Total Support and Revenue	\$ 1,110,370
Expenses	
Program Services	\$ 351,949
Supporting Services	
Management and General	\$ 110,013
Fundraising	\$ 165,114
Total Expenses	\$ 627,076
Change in Net Assets	\$ 483,294

The full audit will soon be available on the Friends of the Cumbres & Toltec Scenic Railroad, Inc. website at

<http://www.cumbrestoltec.org>





Arriana Garcia, stunningly beautiful yet imperfect, is the section foreman's wife at Sublette, New Mexico. Twelve young rail workers live in two bunkhouses next to the section house, and Mrs. Garcia cooks for everyone. But in 1927, during the Roaring 20s, American women are changing. Many like Arriana are rethinking traditional roles. Arriana's husband, Leo, was decorated for bravery in France during World War I and is a strict, effective railroad supervisor, but he has a dark side; Leo is an abuser.

Eliseo Martinez, a star engineer for the D&RGW, quietly falls in love with the married Arriana though he knows better. More than once, Eli sees fresh bruises on Arri.

"If he hurts her again, I'll kill him!"

Eli has stepped into a Sublette funnel in which there is only room for two people to come out alive.

Murder at Toltec Gorge, A Denver & Rio Grande Western Railroad Adventure, by Billy Anders is a love story. Unfortunately, love, a raw human emotion, is sometimes accompanied by violence. This is also a love story that is steeped with railroad history and lore of the San Juan Mountains in the early 20th century.

The historical novel was released in March for the 50th anniversary of the Cumbres & Toltec Scenic Railroad. The author, Billy Anders has "tried very hard to be truthful to the facts of the Denver & Rio Grande Western," and he hopes it will also inspire readers to come ride the train. The book is available from Amazon for \$17.60 and if you are a member of AmazonSmile, the Friends of the C&TS can receive an AmazonSmile donation. The author has also donated copies to local libraries and is giving all profits of the book to further the mission of the Friends and other charitable causes.



Billy Anders has been a member of the Friends of the C&TS since 2008 and an on-board docent since 2016. He is a retired police officer and US Air Force officer.

Remembering Joseph "Joe" C. Vigil, Sr.

Joseph "Joe" C. Vigil Sr., 88, passed away on Friday, November 6, 2020. He was born January 20, 1932 and was preceded in death by his beloved wife Loyola G. Vigil.

In the late 1960s and early 1970s he worked tirelessly to help preserve the Denver & Rio Grande Western and keep the Railroad alive through the "Save the Narrow Gauge" campaign, an effort that culminated with the creation of the Cumbres & Toltec Scenic Railroad.

He served as General Manager of the Railroad, first for Scenic Railways, Inc. and then for Kyle Railways, Inc. He also served organizations such as the Friends of the C&TS, the Rio Grande Railroad Preservation Corp. and the Cumbres and Toltec Scenic Railroad Commission.

Joe also dedicated himself to community services as a long-time member of various boards around Chama and the Chama Valley. Joe will be remembered and celebrated not only for who he was but also for the legacy and example he left behind, a humble, quiet, accepting, and approachable gentleman soaking in Northern New Mexico life with hot chile, cold beer, family, and friends. He expected nothing more in return than a handshake.



There's still time to order your 2021 Friends of the C&TS Calendar!



\$20 each, with shipping
[Foreign orders add \$12]
Order from the Friends office with Visa, MC, Discover or Amex.
505-880-1311

Or by check payable to Friends of the Cumbres & Toltec Scenic Railroad, Inc.
4421 McLeod NE, Suite F
Albuquerque, NM 87109
www.cumbrestoltec.org

DON'T WAIT! JOIN US THIS YEAR ON THE C&TS!

If you love trains, history and volunteer activities, JOIN US as we help preserve the "Living History" of the Cumbres & Toltec Scenic Railroad.

For \$35 a year, you and your family can become Friends and receive the quarterly *C&TS Dispatch*, train ride discounts, invitations to special events and the opportunity to participate in restoration projects each summer, along with the satisfaction of supporting and investing in the historic cultural heritage that is the Cumbres & Toltec!

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Address _____

City, State, Zip _____

My check for \$ _____ is enclosed, or

Charge my Visa / MC / Discover/Amex [circle one] for \$ _____

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Exp. Date _____

Signature _____

Mail to or call:

Friends of the C&TSRR, Inc.
4421 McLeod Road NE, Suite F
Albuquerque, NM 87109
505-880-1311

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Finishing touches, with attention to detail. The late John Weiss drills holes to install a D&RG nameplate on a pedestal destined for RPO 65. D&RG and Pullman plates were created and cast by Weiss for the restorations. For a close-up of the nameplate, see page 9. *Photo by Don Atkinson*